

WHAT IS CLAIMED IS:

1. A self-propelled tool for moving within a passage comprising:
a body;
a gripper secured to said body including at least a gripper portion, said gripper portion having a first position in which said gripper portion limits movement of said gripper portion relative to an inner surface of said passage and a second position in which said gripper portion permits substantially free relative movement between said gripper portion and said inner surface; and
a propulsion assembly for selectively continuously moving said body with respect to said gripper portion of said gripper in said first position.
2. The tool of Claim 1, wherein said propulsion assembly comprises at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head.
3. The tool of Claim 2, wherein said propulsion assembly further comprises a plurality of pistons having heads reciprocally mounted within a plurality of barrels so as to define a plurality of first chambers on a first side of said heads and a plurality of second chambers on a second side of said heads.
4. The tool of Claim 3, wherein said plurality of pistons are arranged in series.
5. The tool of Claim 1, wherein said gripper portion of said gripper comprises a first engagement bladder.
6. The tool of Claim 1, further comprising a bottom hole assembly secured to said body of said tool.
7. The tool of Claim 6, wherein said bottom hole assembly further comprises a drill bit.
8. The tool of Claim 1, wherein said passage defines an insertion location and said tool further comprises a directional control, said directional control allowing said tool to selectively move toward and away from said insertion location within said passage.
9. The tool of Claim 1, wherein said propulsion assembly controls the speed of said tool.

10. The tool of Claim 1, further comprising completion equipment secured to said body of said tool.

11. The tool of Claim 1, further comprising sensor equipment secured to said body of said tool.

12. The tool of Claim 1, further comprising logging sensor equipment secured to said body of said tool.

13. The tool of Claim 1, further comprising a retrieval assembly secured to said body of said tool.

14. The tool of Claim 1, further comprising pipeline servicing equipment secured to said body of said tool.

15. The tool of Claim 1, further comprising communications line equipment secured to said body of said tool.

16. The tool of Claim 1, wherein said body is one of a plurality of bodies, said bodies being connected in series.

17. A self-propelled tool for moving within a passage comprising:

a body;

a gripper secured to said body including a first gripper portion and a second gripper portion, each of said first and said second gripper portions having a first position in which said gripper portion engages an inner surface of said passage to limit movement of said gripper portion relative to said inner surface of said passage and a second position in which said gripper portion permits substantially free relative movement between said gripper portion and said inner surface; and

a propulsion assembly comprising:

a first propulsion assembly portion for selectively moving said body with respect to at least said first gripper portion of said gripper; and

a second propulsion assembly portion for selectively moving said body with respect to at least said second gripper portion of said gripper.

18. The tool of Claim 17, further comprising a control for alternatively actuating said first propulsion assembly portion and said second propulsion assembly portion so that said tool is continuously movable with respect to said inner surface of said passage.

19. The tool of Claim 18, wherein said first and second propulsion assembly portions are actuated with fluid.

20. The tool of Claim 19, further comprising a valve control pack that distributes fluid throughout the tool.

21. The tool of Claim 18, wherein said first propulsion assembly portion and said second propulsion assembly portion are arranged in series.

22. The tool of Claim 17, wherein each of said first propulsion assembly portion and said second propulsion assembly portion comprises a piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head.

23. The tool of Claim 22, wherein said propulsion assembly comprises an open system.

24. The tool of Claim 23, wherein, said body is generally cylindrical and said body, said piston of said first propulsion assembly portion and said piston of said second propulsion assembly portion are coaxially positioned.

25. The tool of Claim 22, wherein said propulsion assembly comprises a closed system.

26. The tool of Claim 25, wherein said body is generally cylindrical and said body, said piston of said first propulsion assembly portion and said piston of said second propulsion assembly portion are coaxially positioned.

27. The tool of Claim 22, wherein said head of said first piston and said head of said second piston move in opposite directions, such that one of said pistons is reset while one of said pistons powers said tool.

28. The tool of Claim 27, wherein one said piston is reset before said other piston completes a power stroke.

29. The tool of Claim 17, wherein said first propulsion assembly and second propulsion assembly control the speed of the tool.

30. The tool of Claim 17, further comprising a bottom hole assembly secured to said body of said tool.

31. The tool of Claim 30, wherein said bottom hole assembly further comprises a drill bit.

32. The tool of Claim 17, wherein said passage defines an insertion location and said tool further comprises a directional control, said directional control allowing said tool to selectively move toward and away from said insertion location within said passage.

33. The tool of Claim 17, further comprising completion equipment secured to said body of said tool.

34. The tool of Claim 17, further comprising sensor equipment secured to said body of said tool.

35. The tool of Claim 17, further comprising logging sensor equipment secured to said body of said tool.

36. The tool of Claim 17, further comprising a retrieval assembly secured to said body of said tool.

37. The tool of Claim 17, further comprising pipeline servicing equipment secured to said body of said tool.

38. The tool of Claim 17, further comprising communications line equipment secured to said body of said tool.

39. The tool of Claim 17, wherein said body is one of a plurality of bodies, said bodies connected in series.

40. A self-propelled tool for moving within a passage, comprising:
a body;

a first engagement bladder secured to said body having a first position in which said first engagement bladder engages an inner surface of said passage and limits movement of said first engagement bladder relative to said inner surface of said passage and a second position in which said first engagement bladder permits substantially free relative movement between said first engagement bladder and said inner surface; and

a propulsion assembly for selectively moving said body with respect to said first engagement bladder when said first engagement bladder is in said first position.

41. The tool of Claim 40, wherein said propulsion assembly comprises at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on one side of said head and a second chamber on the other side of said head.

42. The tool of Claim 41, wherein said propulsion assembly comprises an open system.

43. The tool of Claim 41, wherein said propulsion assembly comprises a closed system.

44. The tool of Claim 41, further comprising a generally central flow channel.

45. The tool of Claim 44, wherein fluid in said central flow channel is selectively forced into one of said first chamber and said second chamber.

46. The tool of Claim 40, wherein said propulsion assembly controls the speed of said tool.

47. The tool of Claim 40, wherein said propulsion assembly further comprises a pump for selectively forcing fluid into one of said first chamber and said second chamber.

48. The tool of Claim 40, further comprising a second engagement bladder secured to said body, said second engagement bladder having a first position in which said second engagement bladder engages an inner surface of said passage and limits movement of said second engagement bladder relative to said inner surface of said passage and a second position in which said second engagement bladder permits substantially free relative movement between said second engagement bladder and said inner surface, and wherein said propulsion assembly comprises:

a first propulsion assembly portion for selectively moving said body with respect to at least said first engagement bladder; and

a second propulsion assembly portion for selectively moving said body with respect to at least said second engagement bladder.

49. The tool of Claim 48, wherein said first propulsion assembly and said second propulsion assembly control the speed of said tool.

50. The tool of Claim 48, further comprising a control mechanism for alternatively actuating said first propulsion assembly portion and said second propulsion

assembly portion so that said tool is continuously movable with respect to said inner surface of said passage.

51. The tool of Claim 50, wherein said first propulsion assembly portion and said second propulsion assembly portion are arranged in series.

52. The tool of Claim 40, comprising a plurality of engagement bladders.

53. The tool of Claim 40, further comprising a bottom hole assembly secured to said body of said tool.

54. The tool of Claim 53, wherein said bottom hole assembly further comprises a drill bit.

55. The tool of Claim 40, wherein said passage defines an insertion location and said tool further comprises a directional control, said directional control allowing said tool to selectively move toward and away from said insertion location within said passage.

56. The tool of Claim 40, further comprising completion equipment secured to said body of said tool.

57. The tool of Claim 40, further comprising sensor equipment secured to said body of said tool.

58. The tool of Claim 40, further comprising logging sensor equipment secured to said body of said tool.

59. The tool of Claim 40, further comprising a retrieval assembly secured to said body of said tool.

60. The tool of Claim 40, further comprising pipeline servicing equipment secured to said body of said tool.

61. The tool of Claim 40, further comprising communications line equipment secured to said body of said tool.

62. The tool of Claim 40, wherein said body is one of a plurality of bodies, said bodies connected in series.

63. A self-propelled tool for moving within a passage comprising:

a generally cylindrical body;

a gripper secured to said body including a plurality of gripper portions, each of said plurality of gripper portions having a first position in which said gripper portion

engages an inner surface of said passage and limits movement of said gripper portion relative to said inner surface and a second position in which said gripper portion permits substantially free relative movement between said gripper portion and said inner surface; and

a propulsion assembly for selectively moving said body with respect to at least one gripper portion of said gripper in said first position, said propulsion assembly comprising:

at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head; and

a fluid system for selectively forcing fluid into said first chamber and said second chamber, wherein said propulsion assembly defines an open system.

64. The tool of Claim 63, wherein said fluid system comprises a valve control pack for distributing fluid throughout the tool.

65. The tool of Claim 63, further comprising a bottom hole assembly secured to said body of said tool.

66. The tool of Claim 65, wherein said bottom hole assembly further comprises a drill bit.

67. The tool of Claim 63, wherein said propulsion assembly controls the speed of the tool.

68. The tool of Claim 63, wherein said passage defines an insertion location and said tool further comprises a directional control, said directional control allowing said tool to selectively move toward and away from said insertion location within said passage. .

69. The tool of Claim 63, further comprising completion equipment secured to said body of said tool.

70. The tool of Claim 63, further comprising sensor equipment secured to said body of said tool.

71. The tool of Claim 63, further comprising logging sensor equipment secured to said body of said tool.

72. The tool of Claim 63, further comprising a retrieval assembly secured to said body of said tool.

73. The tool of Claim 63, further comprising pipeline servicing equipment secured to said body of said tool.

74. The tool of Claim 63, further comprising communications line equipment secured to said body of said tool.

75. The tool of Claim 63, wherein said body is one of a plurality of bodies, said bodies being connected in series.

76. A method of propelling a tool having a body within a passage, comprising:

causing a first gripper portion of a gripper to assume a first position in which said first gripper portion engages an inner surface of said passage and limits movement of said first gripper portion relative to said inner surface;

causing said first gripper portion to assume a second position in which said first gripper portion permits substantially free relative movement between said first gripper portion and said inner surface;

causing a second gripper portion to assume a first position in which said second gripper portion engages said inner surface of said passage and limits movement of said second gripper portion relative to said inner surface;

causing said second gripper portion to assume a second position in which said second gripper portion permits substantially free relative movement between said second gripper portion and said inner surface; and

selectively continuously moving said body with respect to at least one gripper portion of said gripper in said first position.

77. The method of Claim 76, further comprising the steps of alternately moving said body with respect to said first gripper portion when said first gripper portion is in said first position and moving said body with respect to said second gripper portion when said second gripper portion is in said first position so that said tool is continuously moveable with respect to said inner surface of said passage.

78. The method of Claim 76, further comprising the step of forcing fluid into said passage to selectively move said body with respect to said first gripper portion in said first position and said second gripper portion in said first position.

79. The method of Claim 78, wherein said fluid is ambient fluid.

80. The method of Claim 79, wherein said fluid is drilling mud.

81. The method of Claim 78, wherein said fluid is hydraulic fluid.

82. The method of Claim 76, wherein said first gripper portion comprises a first engagement bladder and said second gripper portion comprises a second engagement bladder.

83. The method of Claim 82, wherein said first engagement bladder is selectively filled with fluid to engage said inner surface of said passage.

84. The method of Claim 83, wherein said fluid is ambient fluid.

85. The method of Claim 84, wherein said fluid is drilling mud.

86. The method of Claim 83, wherein said fluid is hydraulic fluid.

87. The method of Claim 76, further comprising the step of providing a propulsion assembly to propel said tool, said propulsion assembly comprising at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head, further comprising reciprocating said head of said first piston within said first barrel.

88. The method of Claim 87, further comprising the step of forcing a fluid within said first cavity of said first barrel to move said head within said first barrel.

89. The method of Claim 88, further comprising the step of alternately forcing a fluid into said first chamber and said second chamber to cause said head to reciprocate within said first barrel.

90. The method of Claim 76, further comprising the step of causing a drill bit secured to said body to continuously penetrate a formation as said tool continuously moves.

91. The method of Claim 76, further comprising the step of moving well completion equipment within a passage.

92. The method of Claim 76, further comprising the step of moving sensor equipment within a passage.

93. The method of Claim 76, further comprising the step of moving logging sensor equipment within a passage.

94. The method of Claim 76, further comprising the step of moving a retrieval assembly within a passage.

95. The method of Claim 76, further comprising the step of moving pipeline service equipment within a passage.

96. The method of Claim 76, further comprising the step of moving communications line equipment within a passage.

97. The method of Claim 76, wherein said body is one of a plurality of bodies, said bodies being connected in series.

98. A method of propelling a tool having a generally cylindrical body and a gripper including a plurality of gripper portions within a passage, comprising:

- causing a first gripper portion to assume a first position in which said first gripper portion engages an inner surface of said passage and limits movement of said first gripper portion relative to said inner surface;

- moving said body with respect to said first gripper portion when said first gripper portion is in said first position;

- causing said first gripper portion to assume a second position in which said first gripper portion permits substantially free relative movement between said first gripper portion and said inner surface;

- causing a second gripper portion to assume a first position in which said second gripper portion engages an inner surface of said passage and limits movement of said second gripper portion relative to said inner surface;

- moving said body with respect to said second gripper portion when said second gripper portion is in said first position;

- causing said second gripper portion to assume a second position in which said second gripper portion permits substantially free relative movement between said second gripper portion and said inner surface; and

- selectively continuously moving said body with respect to at least one gripper portion of said gripper in said first position.

99. The method of Claim 98, further comprising the step of forcing fluid into said passage to selectively move said body with respect to said first gripper portion in said first position and said second gripper portion in said first position.

100. The method of Claim 99, wherein said fluid is ambient fluid.

101. The method of Claim 100, wherein said fluid is drilling mud.

102. The method of Claim 99, wherein said fluid is hydraulic fluid.

103. The method of Claim 98, further comprising the steps of alternately moving said body with respect to said first gripper portion when said first gripper portion is in said first position and moving said body with respect to said second gripper portion when said second gripper portion is in said first position so that said tool is continuously movable with respect to said inner surface of said passage.

104. The method of Claim 98, further comprising the step of providing a propulsion assembly to propel said tool, said propulsion assembly comprising at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head, further comprising reciprocating said head of said first piston within said first barrel.

105. The method of Claim 104, further comprising the step of forcing a fluid into said first chamber and said second chamber to reciprocate said head within said barrel.

106. The method of Claim 105, wherein said forcing fluid step comprises forcing ambient fluid within said passage into one of said first chamber and said second chamber to reciprocate said head within said barrel.

107. The method of Claim 106, wherein said forcing fluid step comprises forcing drilling mud within said passage into said first chamber and said second chamber to reciprocate said head within said barrel.

108. The method of Claim 104, further comprising at least a second piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head, further comprising reciprocating said head of said first piston within said first barrel and said head of said second piston within said second barrel such that said first head and said second head move in opposite directions.

109. The method of Claim 108, wherein said head of said first piston and said head of said second piston reciprocate such that said first piston and said second piston alternately complete a stroke first.

110. The method of Claim 98, further comprising the step of moving well completion equipment within a passage.

111. The method of Claim 98, further comprising the step of moving sensor equipment within a passage.

112. The method of Claim 98, further comprising the step of moving logging sensor equipment within a passage.

113. The method of Claim 98, further comprising the step of moving a retrieval assembly within a passage.

114. The method of Claim 98, further comprising the step of moving pipeline service equipment within a passage.

115. The method of Claim 98, further comprising the step of moving communications line equipment within a passage.

116. The method of Claim 98, wherein said body is one of a plurality of bodies, said bodies being connected in series.

117. A method of propelling a tool having a generally cylindrical body within a passage, secured to the body is a gripper including a first engagement bladder and a second engagement bladder, comprising:

inflating said first engagement bladder to cause said first engagement bladder to assume a first position in which said first engagement bladder engages an inner surface of said passage and limits movement of said first engagement bladder relative to said inner surface;

deflating said first engagement bladder so that said first engagement bladder assumes a second position in which said first engagement bladder permits substantially free relative movement between said first engagement bladder and said inner surface; and

selectively continuously moving said body with respect to at least one engagement bladder of said gripper in said first position.

118. The method of Claim 117, wherein said tool further comprises a second engagement bladder, said method further comprising:

inflating said second engagement bladder to cause said second engagement bladder to assume a first position in which said second engagement bladder engages an inner surface of said passage and limits movement of said second engagement relative to said inner surface; and

deflating said second engagement bladder so that said second engagement bladder assumes a second position in which said second engagement bladder permits substantially free relative movement between said second engagement bladder and said inner surface.

119. The method of Claim 118, further comprising alternately moving said body with respect to said first, and said second engagement bladders of said gripper in said first position.

120. The method of Claim 117, wherein said first engagement bladder is inflated by filling said engagement bladder with fluid.

121. The method of Claim 120, wherein said fluid is ambient fluid.

122. The method of Claim 121, wherein said fluid is drilling mud.

123. The method of Claim 120, wherein said fluid is hydraulic fluid.

124. The method of Claim 117, further comprising the step of providing a propulsion assembly to propel said tool, said propulsion assembly comprising at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head, further comprising reciprocating said head of said first piston within said first barrel.

125. The method of Claim 124, wherein one of said first and second chambers is in fluid communication with said engagement bladder.

126. The method of Claim 124, further comprising the step of forcing a fluid within said first chamber of said first barrel to move said head within said first barrel.

127. The method of Claim 124, further comprising the step of alternately forcing a fluid into said first chamber and said second chamber of said first barrel to cause said head to reciprocate within said barrel.

128. The method of Claim 125, wherein said forcing fluid step comprises forcing ambient fluid within said passage into said first chamber and said second chamber to reciprocate said head within said barrel.

129. The method of Claim 125, wherein said forcing fluid step comprises forcing drilling mud within said passage into said first chamber and second chamber to reciprocate said head within said barrel.

130. The method of Claim 117, further comprising the step of securing said tool to a bottom hole assembly.

131. The method of Claim 130, further comprising positioning said tool within said passage using information from a measurement while drilling device located in said bottom hole assembly.

132. The method of Claim 130, further comprising causing a drill bit located in said bottom hole assembly to continuously contact and penetrate an inner surface of said passage.

133. The method of Claim 117, further comprising the step of moving well completion equipment within a passage.

134. The method of Claim 117, further comprising the step of moving sensor equipment within a passage.

135. The method of Claim 117, further comprising the step, of moving logging sensor equipment within a passage.

136. The method of Claim 117, further comprising the step of moving a retrieval assembly within a passage.

137. The method of Claim 117, further comprising the step of moving pipeline service equipment within a passage.

138. The method of Claim 117, further comprising the step of moving communications line equipment within a passage.

139. The method of Claim 117, wherein said body is one of a plurality of bodies, said bodies being connected in series.

140. A method of propelling a tool having a generally cylindrical body within a passage, secured to said body is a gripper including a gripper portion, comprising:

causing said gripper portion to assume a first position in which said gripper portion engages an inner surface of said passage and limits movement of said gripper portion relative to said inner surface;

causing said gripper portion to assume a second position in which said gripper portion permits substantially free relative movement between said gripper portion and said inner surface; and

forcing ambient fluid into said passage to selectively continuously move said body with respect to said gripper portion of said gripper in said first position.

141. The method of Claim 140, further comprising a first gripper portion and a second gripper portion.

142. The method of Claim 141, wherein said first gripper portion comprises a first engagement bladder and said second gripper portion comprises a second engagement bladder.

143. The method of Claim 142, wherein said first engagement bladder is filled with ambient fluid to engage said inner surface of said passage.

144. The method of Claim 140, further comprising the step of moving a bottom hole assembly within a passage.

145. The method of Claim 140, further comprising the step of moving well completion equipment within a passage.

146. The method of Claim 140, further comprising the step of moving sensor equipment within a passage.

147. The method of Claim 140, further comprising the step of moving logging sensor equipment within a passage.

148. The method of Claim 140, further comprising the step of moving a retrieval assembly within a passage.

149. The method of Claim 140, further comprising the step of moving pipeline service equipment within a passage.

150. The method of Claim 140, further comprising the step of moving communications line equipment within a passage.

151. The method of Claim 140, wherein said body is one of a plurality of bodies, said bodies being connected in series.

152. A method of propelling a tool having a generally cylindrical body within a passage, secured to said body is a gripper including a gripper portion, comprising:

causing said gripper portion to assume a first position in which said gripper portion engages an inner surface of said passage and limits movement of said gripper portion relative to said inner surface;

causing said gripper portion to assume a second position in which said gripper portion permits substantially free relative movement between said gripper portion and said inner surface;

providing a propulsion assembly for selectively moving said body with respect to said gripper portion of said gripper in said first position, said propulsion assembly comprising at least a first piston having a head reciprocally mounted within a first barrel so as to define a first chamber on a first side of said head and a second chamber on a second side of said head; and

selectively continuously moving said body with respect to said gripper portion of said gripper in said first position by forcing fluid into said first chamber to move said head within said first barrel.

153. The method of Claim 152, further comprising the step of moving a bottom hole assembly within a passage.

154. The method of Claim 152, further comprising the step of forcing fluid into said second chamber to move said head within said first barrel.

155. The method of Claim 152, further comprising the step of moving well completion equipment within a passage.

156. The method of Claim 152, further comprising the step of moving sensor equipment within a passage.

157. The method of Claim 152, further comprising the step of moving logging sensor equipment within a passage.

158. The method of Claim 152, further comprising the step of moving a retrieval assembly within a passage.

159. The method of Claim 152, further comprising the step of moving pipeline service equipment within a passage.

160. The method of Claim 152, further comprising the step of moving communications line equipment within a passage.

161. The method of Claim 152, wherein said body is one of a plurality of bodies, said bodies being connected in series.

162. A tool for moving within a passage, comprising:

- a body configured for insertion into a passage, said body defining a piston fixed with respect to said body;

- an assembly mounted radially outward from said body, said assembly at least partially defining a chamber surrounding said piston, said assembly being longitudinally slidable with respect to said body; and

- a gripper coupled to said assembly, said gripper configured to anchor itself to an inner surface of the passage when said gripper is in an expanded condition and permit relative movement between said gripper and said inner surface of said passage when said gripper is in a retracted position;

- wherein a fluid may be directed through said chamber against said piston whereby pressure of said fluid causes relative movement between said assembly and said piston and from said chamber into a gripper actuation channel whereby pressure of said fluid moves said gripper into said expanded condition.

163. The self-propelled tool of Claim 162, said body further comprising a first tubular housing and a second tubular housing, said first tubular housing being disposed around said second tubular housing such that a first annulus is provided there between.

164. The tool of Claim 162, further comprising a valve assembly for selectively directing fluid through said first annulus and out through a plurality of ports extending through said first tubular housing for actuating said gripper.

165. The self-propelled tool of Claim 162, further comprising a bottom hole assembly secured to said body of said tool.

166. The self-propelled tool of Claim 165, wherein said bottom hole assembly further comprises a drill bit.

167. A tool for moving within a passage, comprising:

a body configured for insertion into a passage, said body defining a first piston and a second piston, each fixed with respect to said body;

a first assembly mounted radially outward from said body, said first assembly at least partially defining a first chamber surrounding said first piston, said first assembly being longitudinally slidable with respect to said body; and

a first gripper coupled to said first assembly and longitudinally slidable relative said body, said first gripper defining a first channel and a first gripping surface, said first gripping surface moving radially outward in response to fluid pressure in said first channel;

wherein a fluid may be directed through said first chamber and from said first chamber into said first channel;

a second assembly mounted radially outward from said body, said second assembly at least partially defining a second chamber surrounding said second piston, said second assembly being longitudinally slidable with respect to said body; and

a second gripper coupled to said second assembly and longitudinally slidable relative said body, said second gripper defining a second channel and a second gripping surface, said second gripping surface moving radially outward in response to fluid pressure in said second channel;

wherein a fluid may be directed through said second chamber and from said second chamber into said second channel.

168. The self-propelled tool of Claim 167, said body further comprising a first tubular housing and a second tubular housing, said first tubular housing being disposed around said second tubular housing such that a first annulus is provided there between.

169. The tool of Claim 168, further comprising a valve assembly for selectively directing fluid through said first annulus and out through a plurality of ports extending through said first tubular housing for actuating either said first or second gripper.

170. The tool of Claim 169, said first assembly comprising a first barrel and said second assembly comprising a second barrel.

171. The tool of Claim 167, said first assembly comprising a first barrel and said second assembly comprising a second barrel.

172. The self-propelled tool of Claim 167, further comprising a bottom hole assembly secured to said body of said tool.

173. The self-propelled tool of Claim 172, wherein said bottom hole assembly further comprises a drill bit.

174. A method of moving an item within a passage, comprising:

- providing a tool having an elongate body, an assembly slidably coupled to and extending radially outward from said body and at least partially defining a power chamber there between, and a gripper coupled to said assembly and including a gripper actuation channel, said gripper actuation channel being in fluid communication with said power channel;

- connecting said body to the item;

- moving said tool and the item into the passage;

- directing fluid into said power chamber for producing relative movement between said body and said cylinder for moving the item through the passage; and

- directing fluid through said power chamber and into said gripper actuation chamber for expanding said gripper such that a surface of said gripper engages an inner surface of the passage.

175. A method of moving an item within a passage, comprising:

- providing a tool having an elongate body, first and second assemblies slidably coupled to and surrounding said body and at least partially defining first and second power chambers, and first and second grippers being coupled to said first and second assemblies, respectively;

- connecting said body to the item;

- moving said tool and the item into the passage;

- directing fluid into said first power chamber for causing said body to advance relative to said first assembly;

- directing fluid through said first power chamber for expanding said first gripper;

directing fluid into said second power chamber for causing said body to advance relative to said second assembly; and

directing fluid through said second power chamber for expanding said second gripper.

APPENDIX A

Part No.	Description
100	coiled tubing drilling system
102	power supply
104	tubing reel
106	tubing guide
110	tubing injector
112	puller-thruster downhole tool
114	coiled tubing
116	connector
119	working unit
120	bottom hole assembly
122	downhole motor
124	Measurement While Drilling (MWD) system
126	connector
130	drill bit
132	borehole
134	connection line
200	forward section
201	concentric cylindrical pipes
202	aft section
203	center section
204	innermost cylindrical pipe
205	opening
206	central flow channel
207	aft gripper mechanism
210	second cylindrical pipe
212	first annulus (return flow annulus)
212A	first aft annulus

Part No.	Description
212F	first forward annulus
214	outer cylindrical pipe
216	second annulus (power flow annulus)
216A	second aft annulus
216F	second forward annulus
220	valve control pack
222	forward ripper mechanism
224	forward pistons
226	forward barrel assemblies
230	forward reset chambers
232	forward power chambers
234	aft pistons
236	aft barrel assemblies
240	aft reset chamber
242	aft power chambers
246	inner surface
250	forward expandable bladder
252	aft expandable bladder
302	five filters
304	idler start/stop valve
306	six-way valve
310	aft reverser valve
312	forward reverser valve
501	threads
502	connector
503	threads
504	coaxial cylinder end plug

Part No.	Description
505	port liner
507	spacer plate
510	connector
512	coaxial cylinder end plug
514	seals
516	forward ,piston skin
520	forward fluid chamber
522	forward barrel ends
524	connectors
526	seals
530	forward piston assembly
532	connectors
534	seals
536	forward section (of the forward fluid chamber 520)
540	aft section (of the forward fluid chamber 520)
542	packerfoot attachment barrel end
544	connector,
546	seals
550	packerfoot assembly
552	elastomeric body
554	blind caps
556	inner mandrel
560	set screws
562	shear pins
564	pads
566	connector
570	aft piston skin
572	aft fluid chamber
574	aft barrel ends

Part No.	Description
576	aft piston assembly
580	forward section (of the aft fluid chamber 572)
582	aft section (of the aft fluid chamber 572)
584	fluid channels
601	stress relief groove
602	stab pipes
603	seal
604	seals
605	threads
606	coaxial cylinder assembly flanges
607	seals
610	connectors
612	seals
614	stabilizer blades
616	valve control pack body
620	bores
702	center bore
704	borehole
706	borehole
710	borehole
712	borehole
714	flapper valves
716	fasteners
801	threads
901	sleeves

Part No.	Description
903	valve body
905	valve chamber
912	flow channel
914	fluid piston assembly
916	Bellevue spring
920	fluid piston chamber
922	piston
924	channel
926	flow channel
930	channel
932	drain channel
934	orifice
936	drain channel
940	orifice
942	channel
944	drain channel
946	orifice
952	flow channel
954	flow channel
956	flow channel
960	drain channel
962	orifice
980	fastener holes
1001	channel
1800	fluid system
1801	fluid storage tank
1802	pump

Part No.	Description
1804	motor
1806	valve
2002	directional control valve
2004	bladder sensing valves
2402	electrical control lines
P101	port
P103	port
P105	port
P107	exit ports
P109	port
P111	port
P113	port
P115	port
P117	port
P119	port
P121	port
P123	port
P125	port
P127	port
P129	port
P131	port
P133	port
P135	port
P137	port
P139	port
P141	port
P143	port